Table 5a. Associations between Behavioural Outcome Parameters (Problems) and Predictor Variables

		Preoperative hypoxia	Cardio-circulatory insufficiency	Neurological status	Endurance capacity		Duration of DHCA	Duration of CPB	Acquired abilities	Expressive language	Age at testing
CBCL problem scores*											
Internalizing	Mean Difference‡ 95% Confidence Interval	-7.2 (-14.5,0.1)	-9.8 (-17.0,-2.6)	-7.1 (-13.2,-0.9)	2.7 (-8.7,14.0)	R^2§	0.18	0.18	0.18	0.18	0.18
	p Value	>0.2	***0.03*** ***0.09***	>0.2	>0.2	p Value	>0.2	>0.2	>0.2	>0.2	>0.2
Externalizing	Mean Difference 95% Confidence Interval	-1.3 (-12.2,9.6)	-6.6 (-12.9,-0.2)	-3.3 (-9.3,2.7)	7.5 (-1.8,16.9)	R^2	0.30	0.30	0.30	0.30	*0.30*
	p Value	>0.2	***0.04***	>0.2	>0.2	p Value	>0.2	>0.2	>0.2	>0.2	***0.03*** ***0.06***
Social	Mean Difference 95% Confidence Interval	-16.8 (-25.1,-8.4)	-5.0 (-14.2,4.3)	-9.3 (-15.7,-2.9)	-10.4 (-23.3,2.6)	R^2	0.49	0.49	0.49	0.49	0.49
	p Value	***<0.001*** ***≤0.001***	>0.2	>0.2	>0.2	p Value	>0.2	>0.2	>0.2	>0.2	>0.2
Attention	Mean Difference 95% Confidence Interval	-6.2 (-15.3,3.0)	-6.9 -13.7,0.0)	-3.1 (-8.6,2.3)	2.5 (-4.3,9.3)	R^2	0.24	0.24	0.24	0.24	0.24
	p Value	>0.2 ***0.06***	***0.04***	>0.2	>0.2	p Value	>0.2	>0.2	>0.2	>0.2	*0.13*
Total behavioural	Mean Difference 95% Confidence Interval	-7.4 (-15.8,0.9)	-9.2 (-16.1,-2.3)	-7.2 (-12.8,-1.6)	2.6 (-6.0,11.0)	R^2	0.31	0.31	0.31	*0.31*	0.31
	p Value	>0.2	***0.06***	>0.2	>0.2	p Value	>0.2	>0.2	>0.2	***0.01***	>0.2

* Child Behaviour Checklist [14], assessment by parents in 60 children.

† Inventory for the Assessment of the Quality of Life in Children and Adolescents [16], self-assessment in 60 children.

‡ Mean differences, 95% confidence intervals and p values calculated by a generalized linear model for the effects of severe preoperative hypoxia, peri- and postoperative cardiocirculatory insufficiency, neurological status and endurance capacity with respect to continuous outcomes; underlined p values are significant for the subgroup of children without severe neurological damage (n=54).

§ R^2 and p values calculated by a generalized linear model for the effects of durations of deep hypothermic cardiocirculatory arrest (DHCA) and cardiopulmonary bypass (CPB), acquired abilities, expressive language and age at testing with respect to continuous outcomes; underlined p values are significant for the subgroup of children without severe neurological damage (n=54).

Table 5b. Associations between Behavioural Outcome Parameters (Competences) and Predictor Variables

		Preoperative hypoxia	Cardio-circulatory insufficiency	Neurological status	Endurance capacity		Duration of DHCA	Duration of CPB	Acquired abilities	Expressive language	Age at testing
CBCL competence scores*											
Social	Mean Difference	12.0	6.8	4.2	5.4	R^2	0.55	0.55	0.55	0.55	0.55
	95% Confidence Interval	(1.6,22.5)	(1.0,12.7)	(-2.6,11.0)	(-10.3,21.1)						
	p Value	*0.002* *0.001*	>0.2	>0.2	>0.2	p Value	*<0.001* *≤0.0005*	>0.2	>0.2	>0.2	*0.04* *0.03*
School	Mean Difference	10.8	4.7	9.5	11.5	R^2	0.38	0.38	0.38	0.38	0.38
	95% Confidence Interval	(7.3,14.2)	(-3.8,10.0)	(4.7,14.4)	(8.4,14.5)						
	p Value	>0.2	>0.2	>0.2	>0.2	p Value	>0.2	>0.2	*0.04*	*0.11*	>0.2
Total	Mean Difference	11.9	3.1	6.8	14.8	R^2	0.37	0.37	0.37	0.37	0.37
	95% Confidence Interval	(3.8,20.0)	(-5.1,11.4)	(0.5,13.1)	(10.3,19.3)						
	p Value	>0.2	>0.2	>0.2	>0.2	p Value	>0.2 *0.004*	>0.2	>0.2	>0.2	>0.2

Table 5c. Associations between Quality of Life Parameters and Predictor Variables

		Preoperative hypoxia	Cardio-circulatory insufficiency	Neurological status	Endurance capacity		Duration of DHCA	Duration of CPB	Acquired abilities	Expressive language	Age at testing
IQLC scores†											
Total quality of life	Mean Difference	-0.42	-0.04	-0.23	-0.04	R^2	0.60	0.60	0.60	0.60	0.60
	95% Confidence Interval	(-0.96,0.12)	(-0.35,0.44)	(-0.58,0.13)	(-0.89,0.82)						
	p Value	>0.2	>0.2	>0.2	>0.2	p Value	>0.2	*0.07*	>0.2	>0.2	>0.2
Stress by illness	Mean Difference	-1.28	-0.37	-1.19	-1.95	R^2	0.56	0.56	0.56	0.56	0.56
	95% Confidence Interval	(-2.16,-0.39)	(-1.02,0.29)	(-1.76,-0.63)	(-2.49,-1.40)						
	p Value	>0.2	>0.2	*0.07*	*<0.001*	p Value	>0.2	>0.2	>0.2	>0.2	>0.2
Stress by therapy	Mean Difference	-0.68	-0.47	-0.66	-0.99	R^2	0.14	0.14	0.14	0.14	0.14
	95% Confidence Interval	(-1.41,0.04)	(-1.13,0.20)	(-1.32,-0.05)	(-1.67,-0.31)						
	p Value	>0.2	>0.2	>0.2	>0.2	p Value	>0.2	>0.2	>0.2	>0.2	>0.2